# DATA VALIDATION REPORT

## Gold King Mine Long Term Monitoring- Storm Sampling

## SAMPLE DELIVERY GROUPS: 680-130356-1, 680-130356-2

Prepared by

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# I. INTRODUCTION

| | |
|---|---|
| Task Order Title: | Gold King Mine Long Term Monitoring |
| Project No.: | 20408.012.001.0397.00 |
| Sample Delivery Group: | 680-130356-1, 680-130356-2 |
| EPA Project Manager: | Steve Merritt |
| Weston Project Manager: | Mark Blanchard |
| TDD No.: | 0001/1510-02 |
| Matrix: | Water/Sediment |
| QC Level: | Stage 2A |
| No. of Samples: | 12 |
| No. of Reanalyses/Dilutions: | 0 |
| Laboratory: | TestAmerica - Savannah |

**Table 1. Sample Identification**

| *Location ID* | *Lab Sample Name* | *Matrix Type* | *Collection Date* | *Method* |
|---|---|---|---|---|
| **9426_092916** | 680-130356-9 | Water | 9/29/16 1:25 PM | 200.7, 200.8, 245.1, 2320B, 2340B, 2540 D, 5310 B |
| **9426_SED_092916** | 680-130356-10 | Sediment | 9/29/16 1:25 PM | 6010C, 6020A, 7471A |
| **Bakers Bridge_092916** | 680-130356-11 | Water | 9/29/16 8:15 AM | 200.7, 200.8, 245.1, 2320B, 2340B, 2540 D, 5310 B |
| **Bakers Bridge_SED_092916** | 680-130356-12 | Sediment | 9/29/16 8:15 AM | 6010C, 6020A, 7471A |
| **SJAR_092716** | 680-130356-1 | Water | 9/27/16 11:05 AM | 200.7, 200.8, 245.1, 2320B, 2340B, 2540 D, 5310 B |
| **SJAR_SED_092716** | 680-130356-2 | Sediment | 9/27/16 11:05 AM | 6010C, 6020A, 7471A |
| **SJFP_092816** | 680-130356-3 | Water | 9/28/16 10:50 AM | 200.7, 200.8, 245.1, 2320B, 2340B, 2540 D, 5310 B |
| **SJFP_SED_092816** | 680-130356-4 | Sediment | 9/28/16 10:50 AM | 6010C, 6020A, 7471A |
| **SJLP_092716** | 680-130356-5 | Water | 9/27/16 3:45 PM | 200.7, 200.8, 245.1, 2320B, 2340B, 2540 D, 5310 B |
| **SJLP_SED_092716** | 680-130356-6 | Sediment | 9/27/16 3:45 PM | 6010C, 6020A, 7471A |
| **SJSR_092816** | 680-130356-7 | Water | 9/28/16 2:15 PM | 200.7, 200.8, 245.1, 2320B, 2340B, 2540 D, 5310 B |
| **SJSR_SED_092816** | 680-130356-8 | Sediment | 9/28/16 2:15 PM | 6010C, 6020A, 7471A |

## II. Sample Management

Anomalies regarding sample management are noted below. The samples were received within the temperature limits of >0°C to <6°C. The samples were received intact, on ice and properly preserved. Custody seals on shipping and sample containers were intact. The chains-of-custody (COCs) were appropriately signed and dated by field and laboratory personnel.

The following issues were noted:

- No organization was identified with the relinquishment or receipt signatures.
- Sample 9426_092916 was originally logged only for dissolved aluminum by Method 200.8. The laboratory was notified and the remaining requested analyses (200.7, 200.8, 245.1, 2320B, 2340B, 2540D, 5310B) were performed and reported in SDG 680-130356-2. Data from both SDGs are addressed in this report.

## Data Qualifier Reference Table

| Qualifier | Organics | Inorganics |
|---|---|---|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The associated value is the quantitation limit or the estimated detection limit for dioxins or PCB congeners. | The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit. The associated value is the sample detection limit or the quantitation limit for perchlorate only. |
| UB | The analyte was detected in the sample and in either the associated laboratory blank or field blank. If detected below the reporting limit (RL) the analyte result was reported as non-detected at the RL due to blank contamination. If detected above the RL, the analyte result was reported as non-detected at the reported result due to blank contamination. | The analyte was detected in the sample and in either the associated laboratory blank or field blank. If detected below the reporting limit (RL) the analyte result was reported as non-detected at the RL due to blank contamination. If detected above the RL, the analyte result was reported as non-detected at the reported result due to blank contamination. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| J+ | Not applicable | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential positive bias. |
| J- | Not applicable | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample, and may have a potential negative bias. |

| Qualifier | Organics | Inorganics |
|---|---|---|
| UJ | The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise. |
| UJB | The analyte was detected in the sample and in either the associated laboratory blank or field blank; the analyte result was reported as non-detected at either the RL or the reported result. The reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. | The analyte was detected in the sample and in either the associated laboratory blank or field blank; the analyte result was reported as non-detected at either the RL or the reported result. The reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| N | The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification." | Not applicable. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. | Not applicable. |
| R | The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. | The data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified. |

## Qualification Code Reference Table

| Qualifier | Organics | Inorganics |
|---|---|---|
| H | Holding times were exceeded. | Holding times were exceeded. |
| S | Surrogate recovery was outside QC limits. | The sequence or number of standards used for the calibration was incorrect |
| C | Calibration %RSD or %D was noncompliant. | Correlation coefficient is <0.995 or calibration was noncompliant. |
| R | Calibration RRF was <0.05. | %R for calibration is not within control limits. |
| B | Presumed contamination as indicated by the preparation (method) blank results. | Presumed contamination as indicated by the preparation (method) or calibration blank results. |
| L | Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits. | Laboratory Control Sample %R was not within control limits. |
| L1 | LCS/LCSD RPD was outside control limits. | LCS/LCSD RPD was outside control limits. |
| Q | MS/MSD recovery was poor. | MS recovery was poor. |
| Q1 | MS/MSD RPD was outside control limits. | MS/MSD RPD was outside control limits. |
| E | Not applicable. | Duplicates showed poor agreement. |
| I | Internal standard performance was unsatisfactory. | ICP ICS results were unsatisfactory. |
| A | Not applicable. | ICP Serial Dilution %D were not within control limits. |
| M | Tuning (BFB or DFTPP) was noncompliant. | ICPMS tune was not compliant. |
| T | Presumed contamination as indicated by the trip blank results. | Not applicable. |
| + | False positive – reported compound was not present. | Not applicable. |
| - | False negative – compound was present but not reported. | Not applicable. |
| F | Presumed contamination as indicated by the FB or ER results. | Presumed contamination as indicated by the FB or ER results. |
| F1 | Field duplicate results were outside the control limit. | Field duplicate results were outside the control limit. |
| $ | Reported result or other information was incorrect. | Reported result or other information was incorrect. |

| Qualifier | Organics | Inorganics |
|---|---|---|
| ? | TIC identity or reported retention time has been changed. | Not applicable. |
| D | The analysis with this flag should not be used because another more technically sound analysis is available. | The analysis with this flag should not be used because another more technically sound analysis is available. |
| P | Instrument performance for pesticides was poor. | Post Digestion Spike recovery was not within control limits. |
| *II, *III | Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found. | Unusual problems found with the data that have been described in Section II, "Sample Management," or Section III, "Method Analyses." The number following the asterisk (*) will indicate the report section where a description of the problem can be found. |

# III. Method Analyses

## A. Contract Laboratory Program Statement of Work for Inorganic Superfund Methods 200.7, 200.8, 245.1, 6010C, 6020A, 7471A—Metals and Mercury

Reviewed By: M. Hilchey
Date Reviewed: October 24, 2016, November 29, 2016

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the *Quality Assurance Project Plan for U.S. EPA Region 8 CERCLA Site Assessment; Sampling and Analysis Plan/Quality Assurance Project Plan for Gold King Mine Release, Silverton, San Juan County, Colorado* (2015); *United States Environmental Protection Agency Contract Laboratory Program Statement of Work for Inorganic Superfund Methods; EPA Methods 200.7, 200.8, 245.1*, 6010C, 6020A and 7471A; and the *National Functional Guidelines for Inorganic Superfund Data Review* (2014).

- Holding Times: The analytical holding times, 28 days for mercury and six months for the remaining metals, were met with the exception of sample 9426_092916 for method 245.1. The results for total and dissolved mercury for this sample were qualified as estimated with potential low bias (UJ).

- Analytical Method Blanks: No target analytes reported in the method blanks (MB) were of sufficient to qualify associated site sample results with the exceptions noted in the table below. All associated sample results which were greater than MDL and less than RL were qualified as nondetected (UB), and all associated sample results which were greater than RL and <5x the MB concentration were qualified as estimated with potential high bias (J+).

| Analyte | Method | MB result | Affected samples |
|---|---|---|---|
| dissolved vanadium | 200.8 | 0.817 µg/L | SJAR_092716, SJFP_092816, SJLP_092716, SJSR_092816 |
| total silver | 6020A | 0.053 mg/Kg | All sediment samples |

- Laboratory Control Samples (LCS): The recoveries were within laboratory control limits of 75-125% for methods 6010C and 6020A, 85-115% for methods 200.7, 200.8 and 245.1, and 80-120% for method 7471A.

- Laboratory Duplicates: Laboratory duplicate analyses were not performed on a sample from this SDG. Method precision was evaluated based on matrix spike/matrix spike duplicate results.

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): MS/MSD analyses were performed on sample Bakers Bridge_092916 for methods 200.7, 200.8 and 245.1, and on sample Bakers Bridge_SED_092916 for methods 6010C, 6020A and 7471A.

  Results were not assessed when the native concentration was > 4× the spike amount. The recoveries were within the laboratory control limits of 75-125% for methods 200.7, 6010C and 6020A, 80-120% for method 7471, and 70-130% for methods 200.8 and 245.1 except as noted in the table below. All associated detected sample results were qualified as estimated with high potential bias (J+). The RPDs were ≤20%.

| Analyte | Method | MS/MSD %R | Affected samples |
|---|---|---|---|
| dissolved zinc | 200.8 | 273%/266% | SJAR_092716, SJFP_092816, SJLP_092716, SJSR_092816, Bakers Bridge_092916 |
| arsenic | 6020A | 179%/137% | All sediment samples |
| beryllium | | 135%/146% | |
| cobalt | | 144%/138% | |
| vanadium | | 180%/180% | |
| cadmium | | acceptable/127% | |
| chromium | | acceptable/135% | |
| nickel | | acceptable/132% | |
| selenium | | acceptable/136% | |
| mercury | | 122%/129% | |
| antimony | | 127%/acceptable | |

- Post Digestion Spike (PDS): There were no PDS analyses reported in this SDG.

- Serial Dilution: Serial dilution analyses were not reported in this SDG.

- Field QC Samples: MEC$^X$ evaluated field quality control (QC) samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC$^X$ used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

  - Field Blanks and Equipment Rinsates: Field blank or equipment blank samples were not identified for this SDG.

  - Field Duplicates: Field duplicate samples were not identified for this SDG.

## B. Methods SM2340B, SM2320B, SM2540D, SM5310B—Total Hardness by calculation, Total Alkalinity, Total Suspended Solids (TSS), Dissolved Organic Carbon (DOC), Total Organic Carbon (TOC)

Reviewed By: M. Hilchey
Date Reviewed: November 29, 2016

The samples listed in Table 1 for these analyses were validated based on the guidelines outlined in the *Quality Assurance Project Plan for U.S. EPA Region 8 CERCLA Site Assessment, Sampling and Analysis Plan/Quality Assurance Project Plan for Gold King Mine Release, Silverton, San Juan County, Colorado* (2015); *United States Environmental Protection Agency Contract Laboratory Program Statement of Work for Inorganic Superfund Methods; Standard Methods for the Examination of Water and Wastewater* 2340B, 2320B, 2540D and 5310B; and the *National Functional Guidelines for Superfund Inorganic Data Review* (2014).

- Holding Times: The analytical holding times, as listed below, were met except as noted below.
    - Total Hardness (SM2340B) – 180 days
    - Total Alkalinity (SM2320B) – 14 days
    - Total Suspended Solids (SM2540D) – 7 days
    - Total Organic Carbon (SM5310B)– 28 days
    - Dissolved Organic Carbon (SM5310B) – 28 days

  The holding times (HT) for total alkalinity (53 days) and TSS (50 days) were exceeded by more than 2x past the requirement for sample 9426_092916. Associated detected sample results were qualified as estimated (J).

- Analytical Method Blanks: There were no detects in the method blanks.

- Laboratory Control Samples: LCS/LCSD recoveries were within the laboratory control limits of 80-120% for all methods, and RPDs were within the laboratory control limits of ≤30% for alkalinity, ≤20% for DOC, and ≤25% for TSS and TOC.

- Laboratory Duplicates: Laboratory duplicate analyses were performed on samples SJLP_092716 and Bakers Bridge_092916 for total alkalinity, and on sample Bakers Bridge_092916 for TSS. The RPDs met the QAPP control limit of ≤20% with the exception of TSS (27%). TSS results for all associated samples (SJAR_092716, SJFP_092816, SJLP_092716, SJSR_092816, Bakers Bridge_092916) were qualified as estimated with unknown bias (J).

- Matrix Spike/Matrix Spike Duplicate (MS/MSD): MS/MSD analyses were performed for TOC on sample Bakers Bridge_092916. All laboratory recovery and RPD acceptance criteria were met. MS/MSD analyses were not performed on the remaining methods.

- Field QC Samples: MEC$^X$ evaluated field quality control (QC) samples, and if necessary, qualified based on method blanks and other laboratory QC results affecting the usability of the field QC data. MEC$^X$ used the remaining detects to evaluate the associated site samples. Findings associated with field QC samples are summarized below:

    - Field Blanks and Equipment Rinsates: This SDG had no identified field blank or equipment rinsate samples.

    - Field Duplicates: Field duplicate samples were not identified for this SDG.

# Validated Sample Result Forms: 680-130356-1

## *Analysis Method 200.7 Rev 4.4*

**Sample Name** SJAR_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-1 **Sample Date:** 9/27/2016 11:05:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 5500 | 200 | 24 | ug/L | | | |
| Aluminum, Dissolved | D | 7429-90-5 | 24 | 200 | 24 | ug/L | U | U | |
| Calcium | T | 7440-70-2 | 49000 | 500 | 25 | ug/L | B | | |
| Calcium, Dissolved | D | 7440-70-2 | 45000 | 500 | 25 | ug/L | | | |
| Iron | T | 7439-89-6 | 4400 | 50 | 17 | ug/L | | | |
| Iron, Dissolved | D | 7439-89-6 | 17 | 50 | 17 | ug/L | U | U | |
| Magnesium | T | 7439-95-4 | 8200 | 500 | 33 | ug/L | | | |
| Magnesium, Dissolved | D | 7439-95-4 | 6900 | 500 | 33 | ug/L | | | |
| Potassium | T | 7440-09-7 | 3700 | 1000 | 17 | ug/L | | | |
| Potassium, Dissolved | D | 7440-09-7 | 2400 | 1000 | 17 | ug/L | | | |
| Sodium | T | 7440-23-5 | 28000 | 1000 | 480 | ug/L | | | |
| Sodium, Dissolved | D | 7440-23-5 | 28000 | 1000 | 480 | ug/L | | | |

**Sample Name** Bakers Bridge_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-11 **Sample Date:** 9/29/2016 8:15:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 520 | 200 | 24 | ug/L | | | |
| Aluminum, Dissolved | D | 7429-90-5 | 97 | 200 | 24 | ug/L | J | J | |
| Calcium | T | 7440-70-2 | 39000 | 500 | 25 | ug/L | B | | |
| Calcium, Dissolved | D | 7440-70-2 | 39000 | 500 | 25 | ug/L | | | |
| Iron | T | 7439-89-6 | 560 | 50 | 17 | ug/L | | | |
| Iron, Dissolved | D | 7439-89-6 | 29 | 50 | 17 | ug/L | J | J | |
| Magnesium | T | 7439-95-4 | 4500 | 500 | 33 | ug/L | | | |
| Magnesium, Dissolved | D | 7439-95-4 | 4400 | 500 | 33 | ug/L | | | |
| Potassium | T | 7440-09-7 | 840 | 1000 | 17 | ug/L | J | J | |
| Potassium, Dissolved | D | 7440-09-7 | 820 | 1000 | 17 | ug/L | J | J | |
| Sodium | T | 7440-23-5 | 1800 | 1000 | 480 | ug/L | | | |
| Sodium, Dissolved | D | 7440-23-5 | 1900 | 1000 | 480 | ug/L | | | |

## *Analysis Method 200.7 Rev 4.4*

**Sample Name** SJFP_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-3 **Sample Date:** 9/28/2016 10:50:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 2800 | 200 | 24 | ug/L | | | |
| Aluminum, Dissolved | D | 7429-90-5 | 24 | 200 | 24 | ug/L | U | U | |
| Calcium | T | 7440-70-2 | 67000 | 500 | 25 | ug/L | B | | |
| Calcium, Dissolved | D | 7440-70-2 | 67000 | 500 | 25 | ug/L | | | |
| Iron | T | 7439-89-6 | 2100 | 50 | 17 | ug/L | | | |
| Iron, Dissolved | D | 7439-89-6 | 17 | 50 | 17 | ug/L | U | U | |
| Magnesium | T | 7439-95-4 | 11000 | 500 | 33 | ug/L | | | |
| Magnesium, Dissolved | D | 7439-95-4 | 11000 | 500 | 33 | ug/L | | | |
| Potassium | T | 7440-09-7 | 3500 | 1000 | 17 | ug/L | | | |
| Potassium, Dissolved | D | 7440-09-7 | 3100 | 1000 | 17 | ug/L | | | |
| Sodium | T | 7440-23-5 | 28000 | 1000 | 480 | ug/L | | | |
| Sodium, Dissolved | D | 7440-23-5 | 29000 | 1000 | 480 | ug/L | | | |

**Sample Name** SJLP_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-5 **Sample Date:** 9/27/2016 3:45:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 3000 | 200 | 24 | ug/L | | | |
| Aluminum, Dissolved | D | 7429-90-5 | 24 | 200 | 24 | ug/L | U | U | |
| Calcium | T | 7440-70-2 | 60000 | 500 | 25 | ug/L | B | | |
| Calcium, Dissolved | D | 7440-70-2 | 60000 | 500 | 25 | ug/L | | | |
| Iron | T | 7439-89-6 | 2300 | 50 | 17 | ug/L | | | |
| Iron, Dissolved | D | 7439-89-6 | 17 | 50 | 17 | ug/L | U | U | |
| Magnesium | T | 7439-95-4 | 9100 | 500 | 33 | ug/L | | | |
| Magnesium, Dissolved | D | 7439-95-4 | 8700 | 500 | 33 | ug/L | | | |
| Potassium | T | 7440-09-7 | 3200 | 1000 | 17 | ug/L | | | |
| Potassium, Dissolved | D | 7440-09-7 | 2700 | 1000 | 17 | ug/L | | | |
| Sodium | T | 7440-23-5 | 23000 | 1000 | 480 | ug/L | | | |
| Sodium, Dissolved | D | 7440-23-5 | 24000 | 1000 | 480 | ug/L | | | |

**Sample Name** SJSR_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-7 **Sample Date:** 9/28/2016 2:15:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 3600 | 200 | 24 | ug/L | | | |

## *Analysis Method 200.7 Rev 4.4*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Aluminum, Dissolved | D | 7429-90-5 | 24 | 200 | 24 | ug/L | U | U |
| Calcium | T | 7440-70-2 | 69000 | 500 | 25 | ug/L | B | |
| Calcium, Dissolved | D | 7440-70-2 | 63000 | 500 | 25 | ug/L | | |
| Iron | T | 7439-89-6 | 2900 | 50 | 17 | ug/L | | |
| Iron, Dissolved | D | 7439-89-6 | 17 | 50 | 17 | ug/L | U | U |
| Magnesium | T | 7439-95-4 | 11000 | 500 | 33 | ug/L | | |
| Magnesium, Dissolved | D | 7439-95-4 | 9700 | 500 | 33 | ug/L | | |
| Potassium | T | 7440-09-7 | 3700 | 1000 | 17 | ug/L | | |
| Potassium, Dissolved | D | 7440-09-7 | 2700 | 1000 | 17 | ug/L | | |
| Sodium | T | 7440-23-5 | 28000 | 1000 | 480 | ug/L | | |
| Sodium, Dissolved | D | 7440-23-5 | 27000 | 1000 | 480 | ug/L | | |

## *Analysis Method 200.8*

**Sample Name** SJAR_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-1 **Sample Date:** 9/27/2016 11:05:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum, Dissolved | D | 7429-90-5 | 7.8 | 10 | 4.6 | ug/L | J | J | |
| Antimony | T | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Antimony, Dissolved | D | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Arsenic | T | 7440-38-2 | 1.1 | 1 | 0.37 | ug/L | | | |
| Arsenic, Dissolved | D | 7440-38-2 | 0.52 | 1 | 0.37 | ug/L | J | J | |
| Barium | T | 7440-39-3 | 130 | 2 | 0.14 | ug/L | | | |
| Barium, Dissolved | D | 7440-39-3 | 65 | 2 | 0.14 | ug/L | | | |
| Beryllium | T | 7440-41-7 | 0.28 | 0.4 | 0.15 | ug/L | J | J | |
| Beryllium, Dissolved | D | 7440-41-7 | 0.15 | 0.4 | 0.15 | ug/L | U | U | |
| Cadmium | T | 7440-43-9 | 0.043 | 0.5 | 0.043 | ug/L | U | U | |
| Cadmium, Dissolved | D | 7440-43-9 | 0.043 | 0.5 | 0.043 | ug/L | U | U | |
| Chromium | T | 7440-47-3 | 2.8 | 2 | 1 | ug/L | | | |
| Chromium, Dissolved | D | 7440-47-3 | 1 | 2 | 1 | ug/L | U | U | |
| Cobalt | T | 7440-48-4 | 2.3 | 0.4 | 0.12 | ug/L | | | |
| Cobalt, Dissolved | D | 7440-48-4 | 0.44 | 0.4 | 0.12 | ug/L | | | |
| Copper | T | 7440-50-8 | 5.6 | 5 | 0.5 | ug/L | | | |
| Copper, Dissolved | D | 7440-50-8 | 1.1 | 5 | 0.5 | ug/L | J | J | |
| Lead | T | 7439-92-1 | 3.1 | 0.3 | 0.06 | ug/L | | | |
| Lead, Dissolved | D | 7439-92-1 | 0.06 | 0.3 | 0.06 | ug/L | U | U | |
| Manganese | T | 7439-96-5 | 100 | 2.5 | 1.2 | ug/L | | | |
| Manganese, Dissolved | D | 7439-96-5 | 5.4 | 2.5 | 1.2 | ug/L | | | |
| Molybdenum | T | 7439-98-7 | 1.2 | 1 | 0.45 | ug/L | | | |

## *Analysis Method 200.8*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum, Dissolved | D | 7439-98-7 | 1.2 | 1 | 0.45 | ug/L | | | |
| Nickel | T | 7440-02-0 | 4.7 | 5 | 0.4 | ug/L | J | J | |
| Nickel, Dissolved | D | 7440-02-0 | 2.1 | 5 | 0.4 | ug/L | J | J | |
| Selenium | T | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U | |
| Selenium, Dissolved | D | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U | |
| Silver | T | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Silver, Dissolved | D | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Thallium | T | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U | |
| Thallium, Dissolved | D | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U | |
| Vanadium | T | 7440-62-2 | 8.3 | 1 | 0.3 | ug/L | | | |
| Vanadium, Dissolved | D | 7440-62-2 | 1.1 | 1 | 0.3 | ug/L | B | J+ | B |
| Zinc | T | 7440-66-6 | 14 | 20 | 2.8 | ug/L | J | J | |
| Zinc, Dissolved | D | 7440-66-6 | 2.8 | 20 | 2.8 | ug/L | U | U | |

**Sample Name** Bakers Bridge_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-11 **Sample Date:** 9/29/2016 8:15:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum, Dissolved | D | 7429-90-5 | 100 | 10 | 4.6 | ug/L | | | |
| Antimony | T | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Antimony, Dissolved | D | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Arsenic | T | 7440-38-2 | 0.37 | 1 | 0.37 | ug/L | U | U | |
| Arsenic, Dissolved | D | 7440-38-2 | 0.37 | 1 | 0.37 | ug/L | U | U | |
| Barium | T | 7440-39-3 | 38 | 2 | 0.14 | ug/L | | | |
| Barium, Dissolved | D | 7440-39-3 | 33 | 2 | 0.14 | ug/L | | | |
| Beryllium | T | 7440-41-7 | 0.15 | 0.4 | 0.15 | ug/L | U | U | |
| Beryllium, Dissolved | D | 7440-41-7 | 0.15 | 0.4 | 0.15 | ug/L | U | U | |
| Cadmium | T | 7440-43-9 | 0.19 | 0.5 | 0.043 | ug/L | J | J | |
| Cadmium, Dissolved | D | 7440-43-9 | 0.043 | 0.5 | 0.043 | ug/L | U | U | |
| Chromium | T | 7440-47-3 | 1 | 2 | 1 | ug/L | U | U | |
| Chromium, Dissolved | D | 7440-47-3 | 1 | 2 | 1 | ug/L | U | U | |
| Cobalt | T | 7440-48-4 | 1.6 | 0.4 | 0.12 | ug/L | | | |
| Cobalt, Dissolved | D | 7440-48-4 | 1.6 | 0.4 | 0.12 | ug/L | | | |
| Copper | T | 7440-50-8 | 5.5 | 5 | 0.5 | ug/L | | | |
| Copper, Dissolved | D | 7440-50-8 | 2.3 | 5 | 0.5 | ug/L | J | J | |
| Lead | T | 7439-92-1 | 1.4 | 0.3 | 0.06 | ug/L | | | |
| Lead, Dissolved | D | 7439-92-1 | 0.11 | 0.3 | 0.06 | ug/L | J | J | |
| Manganese | T | 7439-96-5 | 320 | 2.5 | 1.2 | ug/L | | | |
| Manganese, Dissolved | D | 7439-96-5 | 290 | 2.5 | 1.2 | ug/L | | | |
| Molybdenum | T | 7439-98-7 | 0.7 | 1 | 0.45 | ug/L | J | J | |

## *Analysis Method 200.8*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum, Dissolved | D | 7439-98-7 | 0.63 | 1 | 0.45 | ug/L | J | J | |
| Nickel | T | 7440-02-0 | 2.9 | 5 | 0.4 | ug/L | J | J | |
| Nickel, Dissolved | D | 7440-02-0 | 2.9 | 5 | 0.4 | ug/L | J | J | |
| Selenium | T | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U | |
| Selenium, Dissolved | D | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U | |
| Silver | T | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Silver, Dissolved | D | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Thallium | T | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U | |
| Thallium, Dissolved | D | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U | |
| Vanadium | T | 7440-62-2 | 0.47 | 1 | 0.3 | ug/L | J | J | |
| Vanadium, Dissolved | D | 7440-62-2 | 0.3 | 1 | 0.3 | ug/L | U | U | |
| Zinc | T | 7440-66-6 | 170 | 20 | 2.8 | ug/L | | | |
| Zinc, Dissolved | D | 7440-66-6 | 93 | 20 | 2.8 | ug/L | | J+ | Q |

**Sample Name** SJFP_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-3 **Sample Date:** 9/28/2016 10:50:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum, Dissolved | D | 7429-90-5 | 9.8 | 10 | 4.6 | ug/L | J | J | |
| Antimony | T | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Antimony, Dissolved | D | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Arsenic | T | 7440-38-2 | 0.88 | 1 | 0.37 | ug/L | J | J | |
| Arsenic, Dissolved | D | 7440-38-2 | 0.6 | 1 | 0.37 | ug/L | J | J | |
| Barium | T | 7440-39-3 | 100 | 2 | 0.14 | ug/L | | | |
| Barium, Dissolved | D | 7440-39-3 | 82 | 2 | 0.14 | ug/L | | | |
| Beryllium | T | 7440-41-7 | 0.15 | 0.4 | 0.15 | ug/L | U | U | |
| Beryllium, Dissolved | D | 7440-41-7 | 0.15 | 0.4 | 0.15 | ug/L | U | U | |
| Cadmium | T | 7440-43-9 | 0.043 | 0.5 | 0.043 | ug/L | U | U | |
| Cadmium, Dissolved | D | 7440-43-9 | 0.043 | 0.5 | 0.043 | ug/L | U | U | |
| Chromium | T | 7440-47-3 | 1.1 | 2 | 1 | ug/L | J | J | |
| Chromium, Dissolved | D | 7440-47-3 | 1 | 2 | 1 | ug/L | U | U | |
| Cobalt | T | 7440-48-4 | 1.3 | 0.4 | 0.12 | ug/L | | | |
| Cobalt, Dissolved | D | 7440-48-4 | 0.74 | 0.4 | 0.12 | ug/L | | | |
| Copper | T | 7440-50-8 | 3.7 | 5 | 0.5 | ug/L | J | J | |
| Copper, Dissolved | D | 7440-50-8 | 1.3 | 5 | 0.5 | ug/L | J | J | |
| Lead | T | 7439-92-1 | 2.5 | 0.3 | 0.06 | ug/L | | | |
| Lead, Dissolved | D | 7439-92-1 | 0.06 | 0.3 | 0.06 | ug/L | U | U | |
| Manganese | T | 7439-96-5 | 95 | 2.5 | 1.2 | ug/L | | | |
| Manganese, Dissolved | D | 7439-96-5 | 21 | 2.5 | 1.2 | ug/L | | | |
| Molybdenum | T | 7439-98-7 | 1.3 | 1 | 0.45 | ug/L | | | |

## *Analysis Method 200.8*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum, Dissolved | D | 7439-98-7 | 1.5 | 1 | 0.45 | ug/L | | | |
| Nickel | T | 7440-02-0 | 3.7 | 5 | 0.4 | ug/L | J | J | |
| Nickel, Dissolved | D | 7440-02-0 | 3 | 5 | 0.4 | ug/L | J | J | |
| Selenium | T | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U | |
| Selenium, Dissolved | D | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U | |
| Silver | T | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Silver, Dissolved | D | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Thallium | T | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U | |
| Thallium, Dissolved | D | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U | |
| Vanadium | T | 7440-62-2 | 4.6 | 1 | 0.3 | ug/L | | | |
| Vanadium, Dissolved | D | 7440-62-2 | 0.8 | 1 | 0.3 | ug/L | J B | UB | B |
| Zinc | T | 7440-66-6 | 15 | 20 | 2.8 | ug/L | J | J | |
| Zinc, Dissolved | D | 7440-66-6 | 2.8 | 20 | 2.8 | ug/L | U | U | |

**Sample Name** SJLP_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-5 **Sample Date:** 9/27/2016 3:45:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum, Dissolved | D | 7429-90-5 | 16 | 10 | 4.6 | ug/L | | | |
| Antimony | T | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Antimony, Dissolved | D | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Arsenic | T | 7440-38-2 | 0.78 | 1 | 0.37 | ug/L | J | J | |
| Arsenic, Dissolved | D | 7440-38-2 | 0.37 | 1 | 0.37 | ug/L | U | U | |
| Barium | T | 7440-39-3 | 100 | 2 | 0.14 | ug/L | | | |
| Barium, Dissolved | D | 7440-39-3 | 78 | 2 | 0.14 | ug/L | | | |
| Beryllium | T | 7440-41-7 | 0.15 | 0.4 | 0.15 | ug/L | J | J | |
| Beryllium, Dissolved | D | 7440-41-7 | 0.15 | 0.4 | 0.15 | ug/L | U | U | |
| Cadmium | T | 7440-43-9 | 0.043 | 0.5 | 0.043 | ug/L | U | U | |
| Cadmium, Dissolved | D | 7440-43-9 | 0.043 | 0.5 | 0.043 | ug/L | U | U | |
| Chromium | T | 7440-47-3 | 1.3 | 2 | 1 | ug/L | J | J | |
| Chromium, Dissolved | D | 7440-47-3 | 1 | 2 | 1 | ug/L | U | U | |
| Cobalt | T | 7440-48-4 | 1.4 | 0.4 | 0.12 | ug/L | | | |
| Cobalt, Dissolved | D | 7440-48-4 | 0.68 | 0.4 | 0.12 | ug/L | | | |
| Copper | T | 7440-50-8 | 3.9 | 5 | 0.5 | ug/L | J | J | |
| Copper, Dissolved | D | 7440-50-8 | 1.2 | 5 | 0.5 | ug/L | J | J | |
| Lead | T | 7439-92-1 | 2.9 | 0.3 | 0.06 | ug/L | | | |
| Lead, Dissolved | D | 7439-92-1 | 0.06 | 0.3 | 0.06 | ug/L | U | U | |
| Manganese | T | 7439-96-5 | 99 | 2.5 | 1.2 | ug/L | | | |
| Manganese, Dissolved | D | 7439-96-5 | 16 | 2.5 | 1.2 | ug/L | | | |
| Molybdenum | T | 7439-98-7 | 1.2 | 1 | 0.45 | ug/L | | | |

## *Analysis Method 200.8*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum, Dissolved | D | 7439-98-7 | 1.3 | 1 | 0.45 | ug/L | | | |
| Nickel | T | 7440-02-0 | 3.6 | 5 | 0.4 | ug/L | J | J | |
| Nickel, Dissolved | D | 7440-02-0 | 2.6 | 5 | 0.4 | ug/L | J | J | |
| Selenium | T | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U | |
| Selenium, Dissolved | D | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U | |
| Silver | T | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Silver, Dissolved | D | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Thallium | T | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U | |
| Thallium, Dissolved | D | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U | |
| Vanadium | T | 7440-62-2 | 4.7 | 1 | 0.3 | ug/L | | | |
| Vanadium, Dissolved | D | 7440-62-2 | 0.67 | 1 | 0.3 | ug/L | J B | UB | B |
| Zinc | T | 7440-66-6 | 19 | 20 | 2.8 | ug/L | J | J | |
| Zinc, Dissolved | D | 7440-66-6 | 2.8 | 20 | 2.8 | ug/L | U | U | |

**Sample Name** SJSR_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-7 **Sample Date:** 9/28/2016 2:15:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum, Dissolved | D | 7429-90-5 | 11 | 10 | 4.6 | ug/L | | | |
| Antimony | T | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Antimony, Dissolved | D | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Arsenic | T | 7440-38-2 | 1 | 1 | 0.37 | ug/L | | | |
| Arsenic, Dissolved | D | 7440-38-2 | 0.43 | 1 | 0.37 | ug/L | J | J | |
| Barium | T | 7440-39-3 | 120 | 2 | 0.14 | ug/L | | | |
| Barium, Dissolved | D | 7440-39-3 | 81 | 2 | 0.14 | ug/L | | | |
| Beryllium | T | 7440-41-7 | 0.17 | 0.4 | 0.15 | ug/L | J | J | |
| Beryllium, Dissolved | D | 7440-41-7 | 0.15 | 0.4 | 0.15 | ug/L | U | U | |
| Cadmium | T | 7440-43-9 | 0.043 | 0.5 | 0.043 | ug/L | U | U | |
| Cadmium, Dissolved | D | 7440-43-9 | 0.043 | 0.5 | 0.043 | ug/L | U | U | |
| Chromium | T | 7440-47-3 | 1.7 | 2 | 1 | ug/L | J | J | |
| Chromium, Dissolved | D | 7440-47-3 | 1 | 2 | 1 | ug/L | U | U | |
| Cobalt | T | 7440-48-4 | 1.6 | 0.4 | 0.12 | ug/L | | | |
| Cobalt, Dissolved | D | 7440-48-4 | 0.7 | 0.4 | 0.12 | ug/L | | | |
| Copper | T | 7440-50-8 | 4.5 | 5 | 0.5 | ug/L | J | J | |
| Copper, Dissolved | D | 7440-50-8 | 1.2 | 5 | 0.5 | ug/L | J | J | |
| Lead | T | 7439-92-1 | 3.5 | 0.3 | 0.06 | ug/L | | | |
| Lead, Dissolved | D | 7439-92-1 | 0.06 | 0.3 | 0.06 | ug/L | U | U | |
| Manganese | T | 7439-96-5 | 110 | 2.5 | 1.2 | ug/L | | | |
| Manganese, Dissolved | D | 7439-96-5 | 3.6 | 2.5 | 1.2 | ug/L | | | |
| Molybdenum | T | 7439-98-7 | 1.4 | 1 | 0.45 | ug/L | | | |

## *Analysis Method 200.8*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Molybdenum, Dissolved | D | 7439-98-7 | 1.3 | 1 | 0.45 | ug/L | | | |
| Nickel | T | 7440-02-0 | 4.2 | 5 | 0.4 | ug/L | J | J | |
| Nickel, Dissolved | D | 7440-02-0 | 2.9 | 5 | 0.4 | ug/L | J | J | |
| Selenium | T | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U | |
| Selenium, Dissolved | D | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U | |
| Silver | T | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Silver, Dissolved | D | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U | |
| Thallium | T | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U | |
| Thallium, Dissolved | D | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U | |
| Vanadium | T | 7440-62-2 | 6 | 1 | 0.3 | ug/L | | | |
| Vanadium, Dissolved | D | 7440-62-2 | 1 | 1 | 0.3 | ug/L | B | J+ | B |
| Zinc | T | 7440-66-6 | 20 | 20 | 2.8 | ug/L | | | |
| Zinc, Dissolved | D | 7440-66-6 | 2.8 | 20 | 2.8 | ug/L | U | U | |

**Sample Name** 9426_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-9 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum, Dissolved | D | 7429-90-5 | 27 | 10 | 4.6 | ug/L | | | |

## *Analysis Method 2320B-2011*

**Sample Name** SJAR_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-1 **Sample Date:** 9/27/2016 11:05:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | T | STL00171 | 90 | 5 | 5 | mg/L | | | |

**Sample Name** Bakers Bridge_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-11 **Sample Date:** 9/29/2016 8:15:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | T | STL00171 | 31 | 5 | 5 | mg/L | | | |

**Sample Name** SJFP_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-3 **Sample Date:** 9/28/2016 10:50:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | T | STL00171 | 110 | 5 | 5 | mg/L | | | |

## *Analysis Method 2320B-2011*

**Sample Name** SJLP_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-5 **Sample Date:** 9/27/2016 3:45:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | T | STL00171 | 100 | 5 | 5 | mg/L | | | |

**Sample Name** SJSR_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-7 **Sample Date:** 9/28/2016 2:15:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | T | STL00171 | 110 | 5 | 5 | mg/L | | | |

## *Analysis Method 2340B-2011*

**Sample Name** SJAR_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-1 **Sample Date:** 9/27/2016 11:05:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Hardness | T | STL00009 | 160 | 3.3 | 3.3 | mg/L | | | |

**Sample Name** Bakers Bridge_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-11 **Sample Date:** 9/29/2016 8:15:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Hardness | T | STL00009 | 120 | 3.3 | 3.3 | mg/L | | | |

**Sample Name** SJFP_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-3 **Sample Date:** 9/28/2016 10:50:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Hardness | T | STL00009 | 210 | 3.3 | 3.3 | mg/L | | | |

**Sample Name** SJLP_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-5 **Sample Date:** 9/27/2016 3:45:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Hardness | T | STL00009 | 190 | 3.3 | 3.3 | mg/L | | | |

**Sample Name** SJSR_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-7 **Sample Date:** 9/28/2016 2:15:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Hardness | T | STL00009 | 220 | 3.3 | 3.3 | mg/L | | | |

## *Analysis Method 245.1*

**Sample Name** SJAR_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-1 **Sample Date:** 9/27/2016 11:05:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U | U | |
| Mercury, Dissolved | D | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U | U | |

**Sample Name** Bakers Bridge_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-11 **Sample Date:** 9/29/2016 8:15:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U | U | |
| Mercury, Dissolved | D | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U | U | |

**Sample Name** SJFP_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-3 **Sample Date:** 9/28/2016 10:50:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U | U | |
| Mercury, Dissolved | D | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U | U | |

**Sample Name** SJLP_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-5 **Sample Date:** 9/27/2016 3:45:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U | U | |
| Mercury, Dissolved | D | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U | U | |

**Sample Name** SJSR_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-7 **Sample Date:** 9/28/2016 2:15:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U | U | |
| Mercury, Dissolved | D | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U | U | |

## *Analysis Method 2540 D-2011*

**Sample Name** SJAR_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-1 **Sample Date:** 9/27/2016 11:05:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | T | STL00161 | 210 | 6.7 | 6.7 | mg/L | | J | E |

## *Analysis Method 2540 D-2011*

**Sample Name** Bakers Bridge_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-11 **Sample Date:** 9/29/2016 8:15:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | T | STL00161 | 2.9 | 1 | 1 | mg/L | | J | E |

**Sample Name** SJFP_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-3 **Sample Date:** 9/28/2016 10:50:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | T | STL00161 | 92 | 5.6 | 5.6 | mg/L | | J | E |

**Sample Name** SJLP_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-5 **Sample Date:** 9/27/2016 3:45:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | T | STL00161 | 150 | 7.1 | 7.1 | mg/L | | J | E |

**Sample Name** SJSR_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-7 **Sample Date:** 9/28/2016 2:15:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | T | STL00161 | 110 | 4 | 4 | mg/L | | J | E |

## *Analysis Method 5310 B-2011*

**Sample Name** SJAR_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-1 **Sample Date:** 9/27/2016 11:05:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Organic Carbon | T | 7440-44-0 | 4.5 | 1 | 0.5 | mg/L | | | |
| Total Organic Carbon | T | 7440-44-0 | 3 | 1 | 0.5 | mg/L | | | |

**Sample Name** Bakers Bridge_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-11 **Sample Date:** 9/29/2016 8:15:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Organic Carbon | T | 7440-44-0 | 1.1 | 1 | 0.5 | mg/L | | | |

## *Analysis Method 5310 B-2011*

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Total Organic Carbon | T | | 7440-44-0 | 1.1 | 1 | 0.5 | mg/L | | | |

**Sample Name** SJFP_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-3 **Sample Date:** 9/28/2016 10:50:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Organic Carbon | T | 7440-44-0 | 4.2 | 1 | 0.5 | mg/L | | | |
| Total Organic Carbon | T | 7440-44-0 | 2.9 | 1 | 0.5 | mg/L | | | |

**Sample Name** SJLP_092716 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-5 **Sample Date:** 9/27/2016 3:45:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Organic Carbon | T | 7440-44-0 | 3 | 1 | 0.5 | mg/L | | | |
| Total Organic Carbon | T | 7440-44-0 | 2.3 | 1 | 0.5 | mg/L | | | |

**Sample Name** SJSR_092816 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-7 **Sample Date:** 9/28/2016 2:15:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Organic Carbon | T | 7440-44-0 | 3.1 | 1 | 0.5 | mg/L | | | |
| Total Organic Carbon | T | 7440-44-0 | 2.3 | 1 | 0.5 | mg/L | | | |

## *Analysis Method 6010C*

**Sample Name** 9426_SED_092916 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-10 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 4900 | 21 | 3.2 | mg/Kg | | | |
| Calcium | T | 7440-70-2 | 3400 | 52 | 5.4 | mg/Kg | | | |
| Iron | T | 7439-89-6 | 13000 | 21 | 5.5 | mg/Kg | | | |
| Magnesium | T | 7439-95-4 | 3200 | 52 | 9.3 | mg/Kg | | | |
| Potassium | T | 7440-09-7 | 810 | 100 | 2.6 | mg/Kg | | | |
| Sodium | T | 7440-23-5 | 50 | 210 | 50 | mg/Kg | U | U | |

**Sample Name** Bakers Bridge_SED_092916 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-12 **Sample Date:** 9/29/2016 8:15:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|

## *Analysis Method 6010C*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 9400 | 26 | 4 | mg/Kg | | |
| Calcium | T | 7440-70-2 | 4000 | 650 | 68 | mg/Kg | | |
| Iron | T | 7439-89-6 | 30000 | 26 | 6.9 | mg/Kg | | |
| Magnesium | T | 7439-95-4 | 4800 | 650 | 120 | mg/Kg | | |
| Potassium | T | 7440-09-7 | 1200 | 130 | 3.3 | mg/Kg | | |
| Sodium | T | 7440-23-5 | 63 | 260 | 63 | mg/Kg | U | U |

**Sample Name** SJAR_SED_092716 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-2 **Sample Date:** 9/27/2016 11:05:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 7000 | 22 | 3.4 | mg/Kg | | | |
| Calcium | T | 7440-70-2 | 5100 | 55 | 5.8 | mg/Kg | | | |
| Iron | T | 7439-89-6 | 10000 | 22 | 5.9 | mg/Kg | | | |
| Magnesium | T | 7439-95-4 | 2000 | 55 | 9.8 | mg/Kg | | | |
| Potassium | T | 7440-09-7 | 1300 | 110 | 2.8 | mg/Kg | | | |
| Sodium | T | 7440-23-5 | 430 | 220 | 53 | mg/Kg | | | |

**Sample Name** SJFP_SED_092816 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-4 **Sample Date:** 9/28/2016 10:50:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 9100 | 26 | 4.1 | mg/Kg | | | |
| Calcium | T | 7440-70-2 | 8200 | 65 | 6.8 | mg/Kg | | | |
| Iron | T | 7439-89-6 | 13000 | 26 | 6.9 | mg/Kg | | | |
| Magnesium | T | 7439-95-4 | 2700 | 65 | 12 | mg/Kg | | | |
| Potassium | T | 7440-09-7 | 1600 | 130 | 3.3 | mg/Kg | | | |
| Sodium | T | 7440-23-5 | 340 | 260 | 63 | mg/Kg | | | |

**Sample Name** SJLP_SED_092716 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-6 **Sample Date:** 9/27/2016 3:45:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 5100 | 22 | 3.5 | mg/Kg | | | |
| Calcium | T | 7440-70-2 | 4000 | 56 | 5.8 | mg/Kg | | | |
| Iron | T | 7439-89-6 | 8700 | 22 | 5.9 | mg/Kg | | | |
| Magnesium | T | 7439-95-4 | 1500 | 56 | 9.9 | mg/Kg | | | |
| Potassium | T | 7440-09-7 | 960 | 110 | 2.8 | mg/Kg | | | |
| Sodium | T | 7440-23-5 | 230 | 220 | 54 | mg/Kg | | | |

## *Analysis Method 6010C*

**Sample Name** SJSR_SED_092816 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-8 **Sample Date:** 9/28/2016 2:15:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 6900 | 23 | 3.6 | mg/Kg | | | |
| Calcium | T | 7440-70-2 | 7200 | 57 | 6 | mg/Kg | | | |
| Iron | T | 7439-89-6 | 11000 | 23 | 6.1 | mg/Kg | | | |
| Magnesium | T | 7439-95-4 | 2500 | 57 | 10 | mg/Kg | | | |
| Potassium | T | 7440-09-7 | 1200 | 110 | 2.9 | mg/Kg | | | |
| Sodium | T | 7440-23-5 | 250 | 230 | 55 | mg/Kg | | | |

## *Analysis Method 6020A*

**Sample Name** 9426_SED_092916 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-10 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | T | 7440-36-0 | 0.35 | 1 | 0.1 | mg/Kg | J | J+ | Q |
| Arsenic | T | 7440-38-2 | 6.4 | 0.31 | 0.1 | mg/Kg | | J+ | Q |
| Barium | T | 7440-39-3 | 41 | 0.52 | 0.063 | mg/Kg | | | |
| Beryllium | T | 7440-41-7 | 0.35 | 0.052 | 0.016 | mg/Kg | | J+ | Q |
| Cadmium | T | 7440-43-9 | 0.4 | 0.052 | 0.016 | mg/Kg | | J+ | Q |
| Chromium | T | 7440-47-3 | 5 | 1 | 0.11 | mg/Kg | B | J+ | Q |
| Cobalt | T | 7440-48-4 | 4.8 | 0.052 | 0.01 | mg/Kg | | J+ | Q |
| Copper | T | 7440-50-8 | 28 | 0.52 | 0.14 | mg/Kg | | | |
| Lead | T | 7439-92-1 | 48 | 0.21 | 0.052 | mg/Kg | | | |
| Manganese | T | 7439-96-5 | 430 | 1 | 0.13 | mg/Kg | B | | |
| Molybdenum | T | 7439-98-7 | 0.9 | 1 | 0.083 | mg/Kg | J | J | |
| Nickel | T | 7440-02-0 | 6.1 | 1 | 0.27 | mg/Kg | | J+ | Q |
| Selenium | T | 7782-49-2 | 2.7 | 0.52 | 0.1 | mg/Kg | | J+ | Q |
| Silver | T | 7440-22-4 | 0.18 | 0.1 | 0.01 | mg/Kg | B | J+ | B |
| Thallium | T | 7440-28-0 | 0.083 | 0.1 | 0.052 | mg/Kg | J | J | |
| Vanadium | T | 7440-62-2 | 14 | 0.52 | 0.28 | mg/Kg | | J+ | Q |
| Zinc | T | 7440-66-6 | 150 | 2.1 | 1 | mg/Kg | | | |

**Sample Name** Bakers Bridge_SED_092916 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-12 **Sample Date:** 9/29/2016 8:15:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | T | 7440-36-0 | 1.9 | 1.3 | 0.13 | mg/Kg | F1 | J+ | Q |
| Arsenic | T | 7440-38-2 | 20 | 0.39 | 0.13 | mg/Kg | F1 | J+ | Q |
| Barium | T | 7440-39-3 | 140 | 0.65 | 0.078 | mg/Kg | | | |
| Beryllium | T | 7440-41-7 | 0.94 | 0.065 | 0.02 | mg/Kg | F1 | J+ | Q |

*Analysis Method 6020A*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Cadmium | T | 7440-43-9 | 4.2 | 0.065 | 0.02 | mg/Kg | F1 | J+ | Q |
| Chromium | T | 7440-47-3 | 6.5 | 1.3 | 0.14 | mg/Kg | B F1 | J+ | Q |
| Cobalt | T | 7440-48-4 | 20 | 0.065 | 0.013 | mg/Kg | F1 | J+ | Q |
| Copper | T | 7440-50-8 | 110 | 0.65 | 0.17 | mg/Kg | | | |
| Lead | T | 7439-92-1 | 340 | 0.26 | 0.065 | mg/Kg | | | |
| Manganese | T | 7439-96-5 | 3700 | 13 | 1.6 | mg/Kg | B F2 | | |
| Molybdenum | T | 7439-98-7 | 4.9 | 1.3 | 0.1 | mg/Kg | | | |
| Nickel | T | 7440-02-0 | 13 | 1.3 | 0.34 | mg/Kg | F1 | J+ | Q |
| Selenium | T | 7782-49-2 | 4.7 | 0.65 | 0.13 | mg/Kg | F1 | J+ | Q |
| Silver | T | 7440-22-4 | 1 | 0.13 | 0.013 | mg/Kg | B | | |
| Thallium | T | 7440-28-0 | 0.22 | 0.13 | 0.065 | mg/Kg | | | |
| Vanadium | T | 7440-62-2 | 25 | 0.65 | 0.35 | mg/Kg | F1 | J+ | Q |
| Zinc | T | 7440-66-6 | 1500 | 2.6 | 1.3 | mg/Kg | | | |

**Sample Name** SJAR_SED_092716 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-2 **Sample Date:** 9/27/2016 11:05:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | T | 7440-36-0 | 0.11 | 1.1 | 0.11 | mg/Kg | U | U | |
| Arsenic | T | 7440-38-2 | 4 | 0.33 | 0.11 | mg/Kg | | J+ | Q |
| Barium | T | 7440-39-3 | 190 | 0.55 | 0.066 | mg/Kg | | | |
| Beryllium | T | 7440-41-7 | 0.69 | 0.055 | 0.017 | mg/Kg | | J+ | Q |
| Cadmium | T | 7440-43-9 | 0.063 | 0.055 | 0.017 | mg/Kg | | J+ | Q |
| Chromium | T | 7440-47-3 | 7.3 | 1.1 | 0.12 | mg/Kg | B | J+ | Q |
| Cobalt | T | 7440-48-4 | 5.8 | 0.055 | 0.011 | mg/Kg | | J+ | Q |
| Copper | T | 7440-50-8 | 10 | 0.55 | 0.14 | mg/Kg | | | |
| Lead | T | 7439-92-1 | 8 | 0.22 | 0.055 | mg/Kg | | | |
| Manganese | T | 7439-96-5 | 290 | 1.1 | 0.13 | mg/Kg | B | | |
| Molybdenum | T | 7439-98-7 | 0.52 | 1.1 | 0.088 | mg/Kg | J | J | |
| Nickel | T | 7440-02-0 | 7.9 | 1.1 | 0.29 | mg/Kg | | J+ | Q |
| Selenium | T | 7782-49-2 | 4.6 | 0.55 | 0.11 | mg/Kg | | J+ | Q |
| Silver | T | 7440-22-4 | 0.03 | 0.11 | 0.011 | mg/Kg | J B | UB | B |
| Thallium | T | 7440-28-0 | 0.14 | 0.11 | 0.055 | mg/Kg | | | |
| Vanadium | T | 7440-62-2 | 17 | 0.55 | 0.3 | mg/Kg | | J+ | Q |
| Zinc | T | 7440-66-6 | 28 | 2.2 | 1.1 | mg/Kg | | | |

**Sample Name** SJFP_SED_092816 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-4 **Sample Date:** 9/28/2016 10:50:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | T | 7440-36-0 | 0.13 | 1.3 | 0.13 | mg/Kg | U | U | |
| Arsenic | T | 7440-38-2 | 5.4 | 0.39 | 0.13 | mg/Kg | | J+ | Q |
| Barium | T | 7440-39-3 | 240 | 0.65 | 0.078 | mg/Kg | | | |

*Analysis Method 6020A*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Beryllium | T | 7440-41-7 | 0.89 | 0.065 | 0.02 | mg/Kg | | J+ | Q |
| Cadmium | T | 7440-43-9 | 0.15 | 0.065 | 0.02 | mg/Kg | | J+ | Q |
| Chromium | T | 7440-47-3 | 9.1 | 1.3 | 0.14 | mg/Kg | B | J+ | Q |
| Cobalt | T | 7440-48-4 | 7.4 | 0.065 | 0.013 | mg/Kg | | J+ | Q |
| Copper | T | 7440-50-8 | 15 | 0.65 | 0.17 | mg/Kg | | | |
| Lead | T | 7439-92-1 | 13 | 0.26 | 0.065 | mg/Kg | | | |
| Manganese | T | 7439-96-5 | 410 | 1.3 | 0.16 | mg/Kg | B | | |
| Molybdenum | T | 7439-98-7 | 0.86 | 1.3 | 0.1 | mg/Kg | J | J | |
| Nickel | T | 7440-02-0 | 9.7 | 1.3 | 0.34 | mg/Kg | | J+ | Q |
| Selenium | T | 7782-49-2 | 5.6 | 0.65 | 0.13 | mg/Kg | | J+ | Q |
| Silver | T | 7440-22-4 | 0.064 | 0.13 | 0.013 | mg/Kg | J B | UB | B |
| Thallium | T | 7440-28-0 | 0.18 | 0.13 | 0.065 | mg/Kg | | | |
| Vanadium | T | 7440-62-2 | 22 | 0.65 | 0.35 | mg/Kg | | J+ | Q |
| Zinc | T | 7440-66-6 | 56 | 2.6 | 1.3 | mg/Kg | | | |

**Sample Name** SJLP_SED_092716 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-6 **Sample Date:** 9/27/2016 3:45:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | T | 7440-36-0 | 0.12 | 1.1 | 0.11 | mg/Kg | J | J+ | Q |
| Arsenic | T | 7440-38-2 | 3.4 | 0.33 | 0.11 | mg/Kg | | J+ | Q |
| Barium | T | 7440-39-3 | 220 | 0.56 | 0.067 | mg/Kg | | | |
| Beryllium | T | 7440-41-7 | 0.47 | 0.056 | 0.017 | mg/Kg | | J+ | Q |
| Cadmium | T | 7440-43-9 | 0.059 | 0.056 | 0.017 | mg/Kg | | J+ | Q |
| Chromium | T | 7440-47-3 | 5.3 | 1.1 | 0.12 | mg/Kg | B | J+ | Q |
| Cobalt | T | 7440-48-4 | 4.3 | 0.056 | 0.011 | mg/Kg | | J+ | Q |
| Copper | T | 7440-50-8 | 6.7 | 0.56 | 0.15 | mg/Kg | | | |
| Lead | T | 7439-92-1 | 6.9 | 0.22 | 0.056 | mg/Kg | | | |
| Manganese | T | 7439-96-5 | 260 | 1.1 | 0.13 | mg/Kg | B | | |
| Molybdenum | T | 7439-98-7 | 0.8 | 1.1 | 0.089 | mg/Kg | J | J | |
| Nickel | T | 7440-02-0 | 5.2 | 1.1 | 0.29 | mg/Kg | | J+ | Q |
| Selenium | T | 7782-49-2 | 4 | 0.56 | 0.11 | mg/Kg | | J+ | Q |
| Silver | T | 7440-22-4 | 0.03 | 0.11 | 0.011 | mg/Kg | J B | UB | B |
| Thallium | T | 7440-28-0 | 0.088 | 0.11 | 0.056 | mg/Kg | J | J | |
| Vanadium | T | 7440-62-2 | 14 | 0.56 | 0.3 | mg/Kg | | J+ | Q |
| Zinc | T | 7440-66-6 | 25 | 2.2 | 1.1 | mg/Kg | | | |

**Sample Name** SJSR_SED_092816 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-8 **Sample Date:** 9/28/2016 2:15:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | T | 7440-36-0 | 0.12 | 1.1 | 0.11 | mg/Kg | J | J+ | Q |
| Arsenic | T | 7440-38-2 | 4.5 | 0.34 | 0.11 | mg/Kg | | J+ | Q |

## *Analysis Method 6020A*

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Barium | T | 7440-39-3 | 230 | 0.57 | 0.069 | mg/Kg | | | |
| Beryllium | T | 7440-41-7 | 0.62 | 0.057 | 0.017 | mg/Kg | | J+ | Q |
| Cadmium | T | 7440-43-9 | 0.12 | 0.057 | 0.017 | mg/Kg | | J+ | Q |
| Chromium | T | 7440-47-3 | 6.6 | 1.1 | 0.13 | mg/Kg | B | J+ | Q |
| Cobalt | T | 7440-48-4 | 5.3 | 0.057 | 0.011 | mg/Kg | | J+ | Q |
| Copper | T | 7440-50-8 | 10 | 0.57 | 0.15 | mg/Kg | | | |
| Lead | T | 7439-92-1 | 11 | 0.23 | 0.057 | mg/Kg | | | |
| Manganese | T | 7439-96-5 | 290 | 1.1 | 0.14 | mg/Kg | B | | |
| Molybdenum | T | 7439-98-7 | 0.63 | 1.1 | 0.092 | mg/Kg | J | J | |
| Nickel | T | 7440-02-0 | 7 | 1.1 | 0.3 | mg/Kg | | J+ | Q |
| Selenium | T | 7782-49-2 | 4.4 | 0.57 | 0.11 | mg/Kg | | J+ | Q |
| Silver | T | 7440-22-4 | 0.045 | 0.11 | 0.011 | mg/Kg | J B | UB | B |
| Thallium | T | 7440-28-0 | 0.13 | 0.11 | 0.057 | mg/Kg | | | |
| Vanadium | T | 7440-62-2 | 17 | 0.57 | 0.31 | mg/Kg | | J+ | Q |
| Zinc | T | 7440-66-6 | 44 | 2.3 | 1.1 | mg/Kg | | | |

## *Analysis Method 7471A*

**Sample Name** 9426_SED_092916 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-10 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.0081 | 0.02 | 0.0081 | mg/Kg | U | U | |

**Sample Name** Bakers Bridge_SED_092916 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-12 **Sample Date:** 9/29/2016 8:15:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.012 | 0.029 | 0.012 | mg/Kg | J F1 | J+ | Q |

**Sample Name** SJAR_SED_092716 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-2 **Sample Date:** 9/27/2016 11:05:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.0096 | 0.024 | 0.0096 | mg/Kg | U | U | |

**Sample Name** SJFP_SED_092816 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-4 **Sample Date:** 9/28/2016 10:50:00 AM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.011 | 0.026 | 0.011 | mg/Kg | U | U | |

## *Analysis Method 7471A*

**Sample Name** SJLP_SED_092716 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-6 **Sample Date:** 9/27/2016 3:45:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.0096 | 0.024 | 0.0096 | mg/Kg | U | U | |

**Sample Name** SJSR_SED_092816 **Matrix Type:** Solid

**Lab Sample Name:** 680-130356-8 **Sample Date:** 9/28/2016 2:15:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.0095 | 0.024 | 0.0095 | mg/Kg | U | U | |

# Validated Sample Result Forms: 680-130356-2

## *Analysis Method 200.7 Rev 4.4*

**Sample Name** 9426_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-9 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | T | 7429-90-5 | 310 | 200 | 24 | ug/L | | | |
| Aluminum, Dissolved | D | 7429-90-5 | 31 | 200 | 24 | ug/L | J | J | |
| Calcium | T | 7440-70-2 | 57000 | 500 | 25 | ug/L | | | |
| Calcium, Dissolved | D | 7440-70-2 | 57000 | 500 | 25 | ug/L | | | |
| Iron | T | 7439-89-6 | 370 | 50 | 17 | ug/L | | | |
| Iron, Dissolved | D | 7439-89-6 | 47 | 50 | 17 | ug/L | J | J | |
| Magnesium | T | 7439-95-4 | 7000 | 500 | 33 | ug/L | | | |
| Magnesium, Dissolved | D | 7439-95-4 | 7100 | 500 | 33 | ug/L | | | |
| Potassium | T | 7440-09-7 | 2200 | 1000 | 17 | ug/L | | | |
| Potassium, Dissolved | D | 7440-09-7 | 2200 | 1000 | 17 | ug/L | | | |
| Sodium | T | 7440-23-5 | 11000 | 1000 | 480 | ug/L | | | |
| Sodium, Dissolved | D | 7440-23-5 | 11000 | 1000 | 480 | ug/L | | | |

## *Analysis Method 200.8*

**Sample Name** 9426_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-9 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Antimony | T | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Antimony, Dissolved | D | 7440-36-0 | 0.4 | 1 | 0.4 | ug/L | U | U | |
| Arsenic | T | 7440-38-2 | 0.37 | 1 | 0.37 | ug/L | U | U | |
| Arsenic, Dissolved | D | 7440-38-2 | 0.37 | 1 | 0.37 | ug/L | U | U | |
| Barium | T | 7440-39-3 | 42 | 2 | 0.14 | ug/L | | | |
| Barium, Dissolved | D | 7440-39-3 | 41 | 2 | 0.14 | ug/L | | | |
| Beryllium | T | 7440-41-7 | 0.15 | 0.4 | 0.15 | ug/L | U | U | |
| Beryllium, Dissolved | D | 7440-41-7 | 0.15 | 0.4 | 0.15 | ug/L | U | U | |
| Cadmium | T | 7440-43-9 | 0.33 | 0.5 | 0.043 | ug/L | J | J | |
| Cadmium, Dissolved | D | 7440-43-9 | 0.29 | 0.5 | 0.043 | ug/L | J | J | |
| Chromium | T | 7440-47-3 | 1 | 2 | 1 | ug/L | U | U | |
| Chromium, Dissolved | D | 7440-47-3 | 1 | 2 | 1 | ug/L | U | U | |
| Cobalt | T | 7440-48-4 | 0.93 | 0.4 | 0.12 | ug/L | | | |
| Cobalt, Dissolved | D | 7440-48-4 | 1.1 | 0.4 | 0.12 | ug/L | | | |
| Copper | T | 7440-50-8 | 3.2 | 5 | 0.5 | ug/L | J | J | |

## *Analysis Method 200.8*

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Copper, Dissolved | D | 7440-50-8 | 1.3 | 5 | 0.5 | ug/L | J | J |
| Lead | T | 7439-92-1 | 0.74 | 0.3 | 0.06 | ug/L | | |
| Lead, Dissolved | D | 7439-92-1 | 0.06 | 0.3 | 0.06 | ug/L | U | U |
| Manganese | T | 7439-96-5 | 220 | 2.5 | 1.2 | ug/L | | |
| Manganese, Dissolved | D | 7439-96-5 | 210 | 2.5 | 1.2 | ug/L | | |
| Molybdenum | T | 7439-98-7 | 0.62 | 1 | 0.45 | ug/L | J | J |
| Molybdenum, Dissolved | D | 7439-98-7 | 0.6 | 1 | 0.45 | ug/L | J | J |
| Nickel | T | 7440-02-0 | 1.2 | 5 | 0.4 | ug/L | J | J |
| Nickel, Dissolved | D | 7440-02-0 | 1.2 | 5 | 0.4 | ug/L | J | J |
| Selenium | T | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U |
| Selenium, Dissolved | D | 7782-49-2 | 0.58 | 2 | 0.58 | ug/L | U | U |
| Silver | T | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U |
| Silver, Dissolved | D | 7440-22-4 | 0.1 | 1 | 0.1 | ug/L | U | U |
| Thallium | T | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U |
| Thallium, Dissolved | D | 7440-28-0 | 0.1 | 0.2 | 0.1 | ug/L | U | U |
| Vanadium | T | 7440-62-2 | 0.3 | 1 | 0.3 | ug/L | U | U |
| Vanadium, Dissolved | D | 7440-62-2 | 0.3 | 1 | 0.3 | ug/L | U | U |
| Zinc | T | 7440-66-6 | 99 | 20 | 2.8 | ug/L | | |
| Zinc, Dissolved | D | 7440-66-6 | 83 | 20 | 2.8 | ug/L | | |

## *Analysis Method 2320B-2011*

**Sample Name** 9426_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-9 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Alkalinity | T | STL00171 | 75 | 5 | 5 | mg/L | H | J | H |

## *Analysis Method 2340B-2011*

**Sample Name** 9426_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-9 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Hardness | T | STL00009 | 170 | 3.3 | 3.3 | mg/L | | | |

## *Analysis Method 245.1*

**Sample Name** 9426_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-9 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | T | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U H | UJ | H |
| Mercury, Dissolved | D | 7439-97-6 | 0.08 | 0.2 | 0.08 | ug/L | U H | UJ | H |

## *Analysis Method 2540 D-2011*

**Sample Name** 9426_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-9 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Total Suspended Solids | T | STL00161 | 2.4 | 1 | 1 | mg/L | H | J | H |

## *Analysis Method 5310 B-2011*

**Sample Name** 9426_092916 **Matrix Type:** Water

**Lab Sample Name:** 680-130356-9 **Sample Date:** 9/29/2016 1:25:00 PM

| Analyte | Total/Dissolved | CAS No | Result Value | Reporting Limit | MDL | Result Units | Lab Qualifier | Validation Qualifier | Validation Notes |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Organic Carbon | T | 7440-44-0 | 1.5 | 1 | 0.5 | mg/L | | | |
| Total Organic Carbon | T | 7440-44-0 | 1.1 | 1 | 0.5 | mg/L | | | |